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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/812,385

03/30/2004

Gal Basson

P-6583-US

1747

27130 7590 07/02/2007
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EXAMINER

BOCURE, TESFALDET

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

07/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/812,385

Applicant(s)

BASSON ET AL.

Examiner

Tesfaldet Bocure

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9-12, 14-120 and 25-27 is/are rejected.
- 7) ☐ Claim(s) 4-8, 13 and 21-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/16/05
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement received on 3/30/04 has been considered in part. The data to the cited US publication numbers 2002/021165, 2002/054610 and 2003/016703 was incorrect, however the Examiner on the PTO 892 cites the corrected US Publications, 2002/0021165, 2002/0054610 and 2003/0016703.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 10-12, 15-20 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Reusens et al., Reusens hereinafter (US patent publication number 2002/0054610 A1).

Reusens teaches a communication system (figs 1-3) having a transmitter (fig. 2) and a receiver (fig. 3), wherein the transmitter comprising: modulating a first data in one of the subcarriers and modulating the same data (claimed duplicate in claims 2, 11, 16, 19 and 26) into two or more subcarriers as in claims 1, 10, 15, 18 and 25. See paragraph [0007].

Further to claims 3,12,17,20 and 27, the transmitter in the system of Reusens the receiver knows which data bits are duplicated, which are initially transmitted by the transmitter, to the broadly claimed property of the combined signal.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reusens et al., Reusens hereinafter (US patent publication number 2002/0054610 A1).

Reusens teaches a communication system (figs 1-3) having a transmitter (fig. 2) and a receiver (fig. 3), wherein the transmitter comprising: modulating a first data in one of the subcarriers and modulating the same data (claimed duplicate in claims 2,11,16,19

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and 26) into two or more subcarriers as in claims 1,10,15,18 and 25. See paragraph [0007]. Further, Reusens also teaches that the subcarriers are arranged to minimized noise and interference and the application of Fast Fourier Transformation in DSL (see paragraph [0034-0035], however fails to teach that the subcarriers are phase shifted between each other. Phase shifting among a plurality of subcarriers using Orthogonal Frequency Division Multiplexing in the DSL environment is well known and stipulated in the IEEE 802.11a¹ and Examiner is taking an official notice. Therefore, it would have been obvious to one of an ordinary skill in the art to use an OFDM for phase shifting among the subcarriers for minimizing interference between the subcarriers at the time the invention was made.

Allowable Subject Matter

7. Claims 4-8,13 and 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

the claimed subject matter in claims 4-8,13 and 21-24 is allowable because the arts of record fail to teach or fairly suggest the claimed "method further comprising creating an indication, in said first block, of whether said combined signal is followed by a subsequent signal (212) fig. 2) carried by a channel having a channel width (High

¹ See for example US patent publication numbers 2005/0198092, 2004/0148560 and 2004/002179 for application of OFDM to maintain orthogonality between the subcarriers in order to minimize interference in the application of DSL.

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Bandwidth in fig. 2) which is different from the channel width of the first sub-channel" as in claims 4,13 and 21.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent number 7,142,506 issued to Pogrebinsky discloses a transmitter having means for transmitting a duplicate frame.

9. US patent publication numbers 2004/002179, 2004/0148560 and 2005/0198092 issued to Giannakis et al., Hocesvar, Dale and Shen et al. respectively disclose a multicarrier transmission system using OFDM in the application of DSL.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-3015. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti (Jay) Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

T.Bocure

Tesfaldet Bocure
Primary Examiner
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